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IPV

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re PATENT APPLICATION of:

Confirmation Number: 7538

EINOLA ET AL.

Application No.: 09/762,051

Group Art Unit: 2683

Filed: June 20, 2001

Examiner: D'AGOSTA, STEPHEN M.

Title: ARRANGING AUTHENTICATION AND CIPHERING IN MOBILE
COMMUNICATION SYSTEM

December 29, 2004

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REQUEST FOR RECONSIDERATION

Mail Stop Non-Fee Amendments
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

In response to the Office Action dated October 1, 2004, the date for response to which is January 1, 2005, please reconsider the patentability of the pending claims based on the following remarks.

By this Response, no claims are amended, added, or canceled. Accordingly, claims 1-20 remain pending in the patent application.

Applicants acknowledge the Office Action's indication that claims 3-9 and 14-18 contain allowable subject matter. The Office Action also indicated that claims 3-9 and 14-18 would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. However, Applicants delay rewriting those claims at this time to fully afford the Office the opportunity to reconsider the patentability of the pending, rejected, base claims.

Claims 1, 2, 10-13, 19 and 20 were rejected under 35 U.S.C. §103(a) based on Barrett *et al.* (U.S. Pat. No. 5,199,069) (hereinafter "Barrett") in view of Obayashi *et al.* (U.S. Pat.

No. 5,564,077) (hereinafter “Obayashi”). The rejection is respectfully traversed because the cited prior art fails to disclose, teach or suggest all the features recited in the rejected claims.

For example, the cited prior art fails to disclose, teach or suggest a method comprising, *inter alia*, calculating a second cipher key to be used for ciphering traffic between the mobile station and the second mobile communication network in the first mobile communication network when the mobile station operates in the first mobile communication network; transmitting information necessary for calculating the second cipher key from the first mobile communication network to the mobile station when the mobile station operates in the first mobile communication network; and calculating the second cipher key at the mobile station to be used for ciphering traffic between the mobile station and the second mobile communication network, as recited in independent claim 1 and its dependent claims.

Furthermore, the cited prior art fails to disclose, teach or suggest a telecommunication system wherein, *inter alia*, the first mobile communication network is configured to calculate the second cipher key when the mobile station operates in the first mobile communication network, and the first mobile communication network is configured to transmit information necessary for calculating the second cipher key from the first mobile communication network to the mobile station when the mobile station operates in the first mobile communication network, and the mobile station is configured to calculate said second cipher key, as recited in independent claim 12 and its dependent claims.

Similarly, the cited prior art fails to disclose, teach or suggest a network part in a first mobile communication network configured to use a first cipher key for ciphering traffic between the first mobile communication network and the mobile station, wherein the network part is configured to calculate, as the mobile station operates in the first mobile network, a second cipher key to be used for ciphering in a second mobile communication network, the network part is further configured to transmit information necessary for calculating the second cipher key from the first mobile communication network to the mobile station, and wherein the network part is also further configured to transmit the second cipher key to the second mobile communication network, as recited in claim 19.

Additionally, the cited prior art fails to disclose, teach or suggest a mobile station configured to support a first mobile communication network and a second mobile communication network, wherein, *inter alia*, the mobile station is further configured to receive from the first mobile communication network information necessary for calculating a second cipher key to be used for ciphering traffic between the mobile station and the second mobile communication network, as recited in independent claim 20.

Barrett merely discloses how to initiate decryption by selecting an appropriate encryption circuit (*See e.g.*, col. 3, lines 39-49). Specifically, Barrett discloses that the decryption of an encrypted signal is attempted by one of the algorithms and if the encrypted signal is not properly decrypted with that algorithm, another algorithm may be used to decrypt the signal. However, Barrett is completely silent about a method in which calculation of a second cipher key is arranged when the mobile station operates in a first mobile communication network and utilizes a first cipher key. In Barrett, there is no first encryption key already in use when the encryption circuit is selected. There is also no indication, in Barrett, as to why or how to arrange cipher key calculation for another network when the mobile station already operates in a given network. Furthermore, Barrett fails to provide any teaching or suggestion of transmitting information necessary for calculating the second cipher key from the first mobile network to the mobile station when the mobile station operates in the first network. In fact, the disclosure of Barrett is limited only to internal functions of the wireless radio device, and there is no teaching or suggestion of transferring information related to calculating a cipher key from a mobile communication network to the mobile station.

Obayashi fails to remedy the deficiencies of Barrett because Obayashi merely discloses a dual mode radio communication device comprising means for selectively designating and inputting a desired mode from an analogue mode and a digital mode. (*See* col. 2, lines 33-37). Although, the Obayashi device is able to use analogue and digital speech channels, Obayashi fails to teach or suggest calculating a second cipher key, to be used for arranging ciphering in a second mobile communication network, in the first mobile communication network, or for arranging this calculation, or transferring the information necessary for calculating such second cipher key, when the mobile station operates in the first mobile communication network. Additionally, there is clearly no indication about arranging calculation of a second cipher key, *e.g.*, a “CK” key of the UMTS system, when the mobile station operates in a first mobile communication network, *e.g.*, a GSM network, and utilizes a first cipher key, *e.g.*, a “Kc” key of the GSM system, or arranging transmission of information necessary for calculating the second cipher key from the first mobile network to the mobile station when the mobile station operates in the first network. As illustrated, *e.g.*, in Figures 9 and 18 of Obayashi, mode change is actually performed with a single base station, *i.e.*, the base station supports both analogues and digital channels and the mode is changed within a single network. (*See* col. 7, lines 26-32).

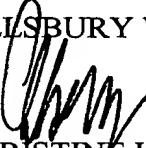
Therefore, the combination of Barrett and Obayashi cannot result, in any way, in the invention of claims 1, 2, 10-13, 19 and 20.

Furthermore, Applicants traverse the prior art rejection because the Office Action has failed to identify where in Barrett and/or in Obayashi some motivation or suggestion to combine the teachings of these references can be found. (*See* MPEP 2143.01). The only rationale set forth by the Office Action to combine the cited references is that Obayashi teaches a second network. The Office Action then concludes that it would have been obvious to modify Barrett, such that a second mobile network is supported. However, the Office Action does not provide any reason as to why such a combination is obvious. For at least this reason, it is respectfully submitted that the Office Action has not set forth a *prima facie* case of obviousness that would render claims 1, 2, 10-13, 19 and 20 obvious. Accordingly, claim 1, 2, 10-13, 19 and 20 are allowable.

Accordingly, reconsideration and withdrawal of the rejection of claims 1, 2, 10-13, 19 and 20 under 35 U.S.C. §103(a) based on Barrett in view of Obayashi are respectfully requested.

The rejection having been addressed, Applicants request issuance of a notice of allowance indicating the allowability of all pending claims. If anything further is necessary to place the application in condition for allowance, Applicants request that the Examiner contact Applicants' undersigned representative at the telephone number listed below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

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